

A Survey of Critical Knowledge and Skills of Business School Graduates: Employer Perspectives

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ABSTRACT

A survey was conducted to gauge the opinions of major corporations in one of the industrial regions in the Midwestern part of USA regarding needed skills and knowledge of undergraduate business students. A sample of 50 top employers in the region participated in a comprehensive survey conducted in 2011. Employers identified crucial topics in all the functional areas of business education. Among them are working in teams, project management, cash flow analysis, financial risk analysis, cost benefit analysis, and proficiency in using popular tools such as Word, and Excel, were rated the highest. Suggestions were also made regarding curricular changes.

Keywords: *business curriculum, skills and knowledge, employer perspective, business education*

INTRODUCTION

The world is becoming a global village and businesses are making fundamental shifts in the way they organize and operate in the new economy. Universities across the globe are increasingly required to produce highly skilled graduates who are able to respond to the ever changing and complex needs of the work place (Andrews and Higson, 2008). It is imperative that business schools should evaluate their curriculum and offerings so that they are preparing their students to match the needs of the new workplace.

What business skills and knowledge should a freshly graduated undergraduate business student should have after a 4-year of college? Alternatively, what important topics should be covered in an ideal business program? These are the questions that all the business schools are asking, but few know exactly what the answers are. As part of the business curriculum design process, schools supposedly should conduct surveys of employers regularly to identify employers' expectations on the knowledge and skills of their graduates. However, comprehensive surveys are difficult to conduct because employers are reluctant to respond to a lengthy questionnaire due to time constraints. Thus, most surveys are made short to maximize the response rate. Unfortunately, a short survey instrument usually deals only with summary skills or knowledge, such as communication, critical thinking, or problem solving. It seldom provides specific insights to the business schools on what important business knowledge the professors should teach in different functional areas of business, such as accounting, finance, management or marketing. This study fills the gap in the business education literature by reporting the employer's expectations of what specific topics should be covered. We surveyed a sample of 50 top employers from diversified industries located near a medium-size metropolitan area in one of the industrial states of the Midwestern region in USA. In the extended survey instrument that we designed, employers were asked to rate the relative importance of various topic areas that should be covered in an ideal undergraduate business program.

LITERATURE REVIEW

Mallinger (1998) conducted a survey among 62 faculty and business advisory council members in Southern California area by asking what skills would be required of 21st century managers. Among the top five skills or attributes identified by the respondents are communication and interpersonal skills, ethical or spiritual orientation, the ability to manage change and motivate, analytical and problem solving skills, and being a strategic/visionary manager.

The survey provided an insight into what soft skills expected of business students in the 21st century, but it did not explore into the specific topics areas that should be included in the business curricula.

Peter D. Hart Research Associates, Inc. (2006) conducted a survey among 305 employers and 510 recent college graduates regarding how colleges should prepare students to succeed in today's global economy. The study found that employers' priorities for a college education parallel the four categories of essential learning outcomes outlined by National Leadership Council for Liberal Education and America's Promise (LEAP). The first category is the ability to apply knowledge and skills to real-world settings through internships or other hands-on experiences (integrative learning). The second category is the knowledge of human cultures and the physical and natural world obtained through the study of arts, society, and science. The third category includes intellectual and practical skills such as communication, critical thinking, and problem solving. The fourth category relates to personal and social responsibility, integrity and ethics, teamwork, and global diversity. The survey provides curriculum guidelines primarily for general education and liberal art education, even though some of the skills are related to business students.

Andrews and Higson (2008) conducted in-depth interviews of business graduates and employers in four European countries – UK, Romania, Slovakia and Austria. They did a qualitative analysis of their data. They found out that work experience, and ability to use softer business skills were important and concluded that graduates must have 'soft' skills above and beyond 'hard' business skills to meet the challenges of the 21st century workplace.

Trilling and Fadel (2009) investigated why and how the global landscape for learning is reshaping itself, and what this global transformation, often called the "21st century skills movement", may impact schools and universities. Based on a framework developed by the Partnership for 21st Century Skills, they highlighted the following skills needed to survive and thrive in a complex and connected world: learning and innovation skills, digital literacy skills, and life and career skills. Their study pointed out the future direction of college education, including business education, but did not dwell specifically on the scope of business curriculum in the 21st century.

Uyar and Gungormus (2011) conducted a survey on external auditors in Turkey regarding the professional knowledge and the skills/attributes that are considered important of a graduate who intends to be an auditor. The study included two dimensions: soft skills and professional knowledge. The most important skills that graduates are expected to possess are ethics, teamwork, and honesty. As to professional knowledge, several courses are perceived to be extremely necessary, e.g. auditing, Microsoft office programs, accounting and financial reporting standards, financial statement analysis, financial accounting, capital market regulations, cost accounting, and managerial accounting. Compared with previous studies, this study provides some insight on what subject areas should be emphasized. However, the study was narrowly aimed at accounting program and therefore did not apply to the business curriculum in general.

David et al (2011) examined disparity between business school focus and business community needs. They conducted a content analysis of 200 corporate job descriptions collected in Fall 2009, revealing 140 specific license/certification/skills commonly cited as required for candidates applying for business jobs. They also examined 200 resumes of business students nearing graduation, revealing low to no proficiency on the job description-derived skill sets. Their finding suggests that disparity between school of business focus and practitioner needs is ongoing and potentially problematic, at least at the institutions sampled. A content analysis of 100 schools of business course syllabi and 20 textbooks supported this conclusion. Their study highlighted the importance of periodic survey of employer expectations to reduce the disparity between business curricula and business community needs.

METHODOLOGY

We followed a methodology consisting of multiple stages that included a pilot study, development of a detailed questionnaire, and actual collection of data. Throughout the study, the faculty and the business advisor council of an AACSB accredited non-doctoral business school were very actively involved and provided needed assistance. Six corporations from the region with their main expertise in the core academic business areas such as accounting, economics, finance, information technology, management and marketing were selected for the pilot study. A team of faculty members from the above mentioned business school representing these six core areas participated in the on-site

interviews with the divisional managers to identify the concerns. Based on the literature, interview data, and inputs from the faculty and business advisory council, a preliminary questionnaire was prepared. The accuracy and effectiveness of the questionnaire was tested by collecting a preliminary set of data from the six corporations. The questionnaire was revised and was presented to the business school advisory council for their final input.

The survey questionnaire consisted of five major sections. The first two sections related to the industry type and demographics. The sections three to five, included several 5-point likert scale items. The third section consisted of an array of activities that the participant company find important. The fourth section included 71 five-point likert scale items related to the core academic areas such as accounting and finance, management and marketing, information technology, and global economy. The last section included 11 items related to the curricular changes.

The survey questionnaire was sent to the top 50 employers in the region. The employers were selected based on the data provided by the regional partnership economic development authority. The survey questionnaire along with a cover page from the Dean of the business school was mailed to the selected participants. The letter from the Dean included the purpose of the study, and the instructions for completing the sections by managers with relevant knowledge. After three weeks of mailing the survey questionnaire, a follow up letter was sent by the Dean.

A total of 31 usable responses were returned. Due to the length of the questionnaire, this response rate (62%) was considered satisfactory for the purpose of the study. The companies included in the final sample represented diverse industries from the region, including manufacturing (23 percent), banking and investments (16 percent), accounting and financial services (13 percent), telecommunications (10 percent), healthcare (10 percent), retail and distribution (3 percent), and real estate and construction (3 percent).

RESULTS

The main findings of this study are provided in Tables 1 to 6. Only those activities which have been rated by more than 50% of the respondents are listed in tables 1 to 5. Table 1 illustrates the overall activities considered important by the firms. Among the top five (received over 80% rating) are project management, customer interaction, financial risk analysis, risk management, and team work. Project management which was rated by 96.8% respondents as important came in first. The most important skills specifically related to accounting and finance are listed in table 2. The ability to calculate cash flow from a given project ranks the first on this list, followed by the ability to determine the impact of the cost of capital on capital budgeting decisions, preparing segmental or interim reports and disclosure, evaluating risk-adjusted returns on investments, determination of the duration of assets and liabilities, and lean accounting.

Table 1: Top important activities in the firm

Activities in the Firm	% of responses indicating importance
Project Management	96.8
Customer Direct Interaction	87.1
Financial Risk Analysis	87.1
Risk Management	87.1
Teamwork	80.7
Domestic Marketing	77.4
Continuous Improvement Plans	71.0
Strategic Analysis of Competition	70.9
Cost Accounting	67.7
Product Development	64.5
Inventions and Innovations	61.3
Analysis of Government Tax Policies	58.1
Mergers and Acquisitions	58.1
Analysis of Global Economy	54.9
Retail Sales	51.7
Analysis of Economic Conditions	51.6

Table 2: Top 10 important skills in Accounting and Finance

Skills in Accounting and Finance	% of responses indicating importance
Calculate cash flow from a given project	80.7
Determine the impact of cost of capital on capital budgeting decisions	74.2
Prepare segmental or interim reports and disclosure	67.7
Evaluate risk adjusted returns on investments	64.5
Determine the duration of assets and liabilities	58.1
Lean accounting	54.8

Important skills related to management and marketing are presented in Table 3. The top five skills that are considered important by the employers are: working with others in a team, forming the right team appropriate for specific tasks, effectively managing goal-oriented teams, making ethical business decisions and analyzing industry trends. Table 4 tabulates important skills considered important in information technology. Skills that employers value the most are working with popular productivity tools such as Word, Excel and PowerPoint, thinking in system's perspective and understanding the relations among functional units and the usage of software tools for communication of information.

Table 3: Top important skills in Management and Marketing

Skills in Management and Marketing	% of responses indicating importance
Work with others in a team	87.1
Form types of teams appropriate for specific tasks	83.9
Effectively manage goal oriented teams	80.6
Analyze industry trends	74.2
Make ethical business decisions	74.2
Analyze industry trends	71.0
Identify untapped market and customers' needs	64.5
Recognize ethical conflicts in business situations	64.5
Understand effective traits for leadership	61.3
Change management processes to handle change	61.3
Differentiate between leadership and management	61.3
Formulate market strategies	61.3
Understand behavioral models of leadership	58.1
Conduct market research	58.1
Incorporate customer needs in a product development plan	58.1
Distinguish constructive from destructive conflicts	54.8
Identify sources of conflict	51.6
Effectively utilize conflict management strategies	51.6
Identify forces for and against organizational change	51.6

Table 4: Top important skills in Information Technology

Skills in Information Technology	% of responses indicating importance
Work with popular productivity tools such as Word	90.3
Work with popular productivity tools such as Excel	87.1
Think in system's perspective and understand the relationships among functional units	83.9
Use software tools and techniques for communication of information	83.9
Work with popular productivity tools such as PowerPoint	80.7
Understand the influence of functional units on each other	77.4
Model business problems using popular spreadsheet software	74.2
Use IT tools for communication between various business departments within organization	71.0
Use Business Intelligence tools to analyze organizational problems and create reports	67.7
Use software tools to predict financial performance	64.5

Use database tools to solve business problems	64.5
Work with popular productivity tools such as Access	61.3
Use Enterprise Applications such as Enterprise Resource Planning (ERP)	61.3
Model business processes using IT tools	51.7
Translate business needs into IT systems requirements	51.6

Table 5 reports skills that are considered important by employers in the area of global economics. The top five skills emphasized by the employers are: understanding issues involved in conducting cost benefit analysis, understanding the importance of sustained comparative advantage in business, calculating indirect or opportunity costs of decision-making in business, recognizing sources of economy of scale and conducting quality control statistical analysis. Finally, respondents were asked if they saw any need to add any new course or program. The employers were asked the courses needed to be offered and which will bring most value. Table 6 illustrates the response as to what the school should offer. The courses or certificate programs that received the most votes are project management and financial risk management. Other curriculum recommendations include offering a business minor or courses for engineers and healthcare professionals and a new course in energy economics.

Table 5: Top important skills related to global economics

Skills related to global economics	% of responses indicating importance
Understands issues involved in conducting cost benefit analysis	74.4
Understand the importance of sustained comparative advantage in business	74.2
Calculate indirect or opportunity costs of decision making in business	64.5
Recognize sources of economies of scale	58.1
Conduct statistical quality control analysis	54.8
Analyze the impact of changing financial regulations on business	51.7

Table 6: Needed curricular changes

School of Business should offer	% of Responses
Course in Project Management	77.4
Course in Financial Risk Management	67.7
Business certificate in Project Management	51.7
Certificate in financial Risk Management	42.7
Business minor for engineers	32.3
Business certificate program for engineers	25.8
Course in Health Economics	12.9
Course in business for Health Issues	16.2
Course in Energy Economics	19.3
Business certificate program for nurses	3.2

DISCUSSION & CONCLUSIONS

While previous studies had identified major skills or general knowledge that employers expect of business graduates, most of them did not provide in-depth information that business schools could use in revising or improving their business curricula. Compared with previous studies, our research contributes to the business education literature by offering detailed topic areas or courses business schools should consider including them in their curricula.

Several noteworthy results emerged from our study. First, project management and risk management ranked on the very top of the activities valued by the employers and they are the programs that are most lacking or emphasized inadequately in existing business curricula. In the complex globalized business sector, project management is increasingly playing a critical role. More and more organizational structures are based on project management rather than based on function, product, process or customer. Project management and teamwork are the major trend in the current business world. With the emphasis on projects, the difference between job categories and descriptions are evaporating. Many employees today straddle functional and departmental boundaries and handle multiple tasks. Project

teams are created outside the formal organizational structure to undertake a project of special importance and expect to disband when it is completed. More companies currently are using project teams to execute a highly important task and they are provided the freedom and resources to bring projects to closure quickly. Thus, those graduates who can manage projects will do better in their career. Managing risk is also critical in today's dynamic environment. Managers often will make their decisions on information that is not perfect. Thus, often times their decisions will be probabilistic rather than one on certainty. The skills needed would be to analyze the options, assign probability and come up with an optimum decision. Second, our study found that several aspects of teamwork skills such as forming the right type of teams and managing goal-oriented teams are specifically emphasized by the employers. Numerous studies have indicated that interpersonal skills and the ability to work successfully in a team setting are crucial. Third, in terms of information technology, employers were quick to point out that it was not only the ability to use software, but also the ability to think and analyze in a system's perspective that they valued the most, particularly, the ability to understand the relationships among various functional units and the influence of functional units on each other. They also felt that students' ability to model business problems using spreadsheets is an important aspect. Modeling allows decision makers to explore the impact of changes through sensitivity analysis that further reduces uncertainty and improves the effectiveness of management decisions. IT has become a de facto tool for communication of information to various stakeholders. Knowledge of communication technologies is no doubt expected of all students. Finally, in the marketing area, our study reported that employers primed the ability to analyze industry trend and the ability to identify untapped market and customer needs. This is particularly important as companies are exploring new markets globally to sell their products and services and thus immune themselves to fluctuations in the home country. Also as customer tastes and preferences are changing rapidly, it is vital that business keep abreast of them to make the necessary changes to their product or service mix to remain competitive.

However there are several findings that were surprising. In the area of accounting and finance, we were surprised that Chapter 11 corporate reorganization (9.7%) and the ability to calculate portfolio variations due to market fluctuations (25.8%) received such low scores. In the current volatile economy, changes in portfolio happen on a regular basis and often even the large corporations do go through Chapter 11. In the management and marketing, the situational leadership received only a score of 38.7%. We expected that the ability to adapt to the changing situations is critical in a dynamic environment. In the area of information technology, where outsourcing is a very common occurrence, contrary to the popular belief our study found respondents did not consider selecting and managing IT outsourcing relationships to be crucial (19.4%). In the area of global economy, we were taken aback by the low importance given to understanding the impact of foreign exchange rate (29%) and international law (29.1%).

A couple of limitations should be pointed out for this study. For one thing, we wish that the sample size of our study could have been larger. However, given the extreme length of our survey instrument, we have to compromise on the size of our sample as a practical matter. For another thing, the employers included in the sample, although representative in our region, may not be representative for employers in other areas. It is clear that the industry cluster in our region is somewhat unique because of the geography and the history of economic development in the region. A subsequent larger study encompassing other regions of the USA is necessary before broad, generalized conclusions can be drawn.

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